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WATER SUPPLY OUTLOOK FOR UTAH



U. S. DEPARTMENT of AGRICULTURE * SOIL CONSERVATION SERVICE

Collaborating with

UTAH STATE DEPARTMENT OF NATURAL RESOURCES
-- DIVISION OF WATER RIGHTS





WATER SUPPLY OUTLOOK FOR UTAH

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

R. M. DAVIS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

GEORGE D. McMILLAN

STATE CONSERVATIONIST SOIL CONSERVATION SERVICE SALT LAKE CITY, UTAH

In Cooperation with

UTAH STATE DEPT. OF NATURAL RESOURCES

DEE C. HANSEN
State Engineer
Division of Water Rights

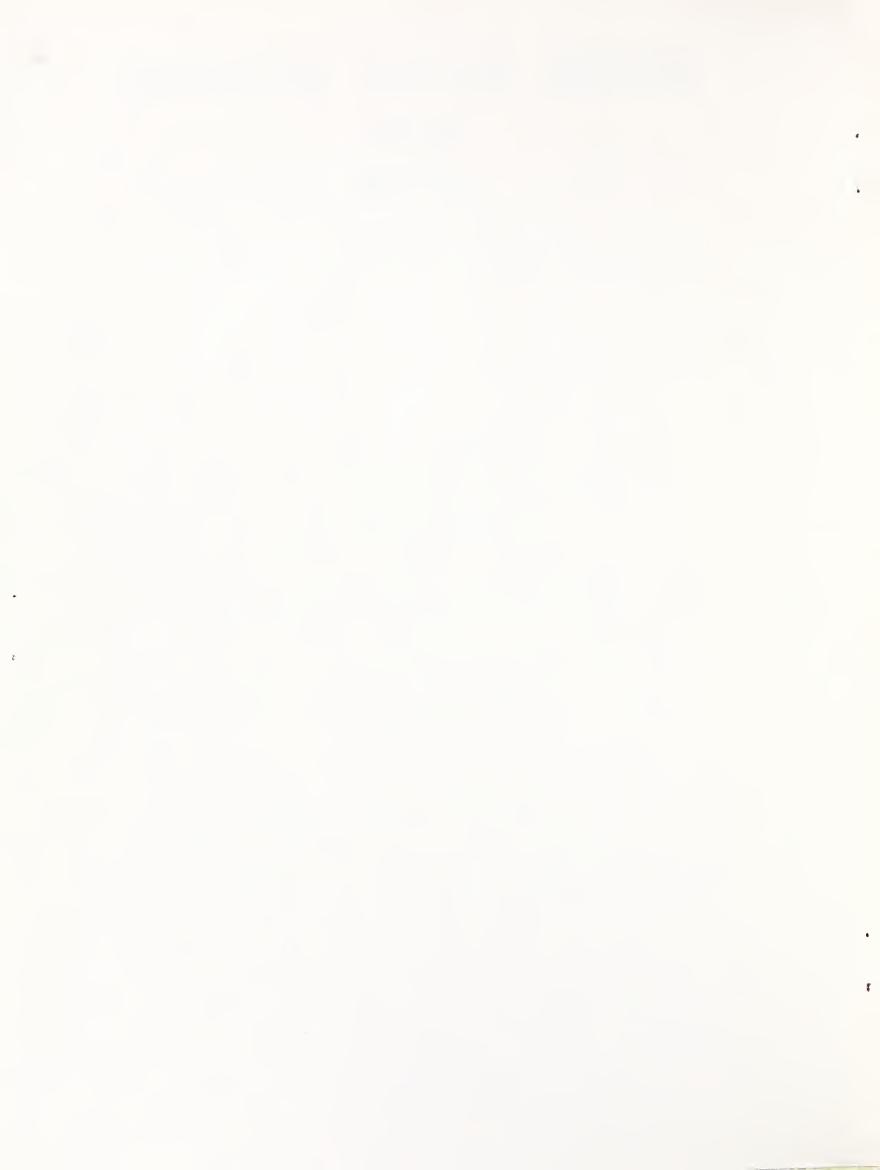
DANIEL F. LAWRENCE
Director
Division of Water Resources

Report prepared by

BOB L. WHALEY, Snow Survey Supervisor KENNETH C. JONES, Assistant Snow Survey Supervisor and

LINDA K. LYTTON, Statistical Assistant

SOIL CONSERVATION SERVICE SNOW SURVEY SECTION 4012 FEDERAL BUILDING SALT LAKE CITY, UTAH 84138



WATER SUPPLY OUTLOOK

as of JANUARY 1, 1979

* Utah's 1979 water supply outlook is above average. Snow *
* cover ranges from near average to double average. Water- *

* shed soil moisture ranges from below average in northern *

* Utah to above average in southern Utah. Reservoir storage*

* is 102% of the 1963-77 15 year average, statewide.

SNOW COVER

Snow surveys taken the last few days of December and the first week of January show water contents ranging from near average on Salina Creek to better than double the average on the Upper Sevier and Virgin Rivers. Price River is 118% of the January 1 average, Duchesne River is 130%, Provo River 113%, Weber River 112%, Ogden River 161%, and Bear River 124% of average.

Snow courses below the 8,000 foot elevation are generally 130% of average or better while those at higher elevations are less than 130%. Snow cover is generally much improved over last January 1.

PRECIPITATION

Fall precipitation in Utah's mountains ranged from as low as 63% of average on Farmington Creek to 189% of average at Widtsoe #3 on the ridge between the east fork of the Sevier River and the Escalante River in southern Utah.

Fall precipitation in the mountains was generally below average to near average in the northern part of the state, near average to above average in central and southern Utah. This is the opposite of last years moisture pattern in the state.

RESERVOIR STORAGE

January 1 storage in 19 of Utah's key irrigation reservoirs is 102% of the 15 year average (1963-77) and 135% of last year at this time.

Reservoir storage is lowest on the Sevier River with Sevier Bridge at 49% of average, Piute at 57%, Otter Creek at 66%, and Gunnison at 75% of average for January 1. Minersville Reservoir is 106% of average.

Weber basin storage ranges from 104% of average at Rockport to 132% at East Canyon.

Pineview Reservoir is 111% and Causey 94% of average.

Bear Lake is 95% of average and Woodruff Narrows is estimated about average.

WATER SUPPLY OUTLOOK (continued)

Strawberry Reservoir is 106% and Utah Lake 116% of average.

Scofield Reservoir is 115% of average.

STREAMFLOW

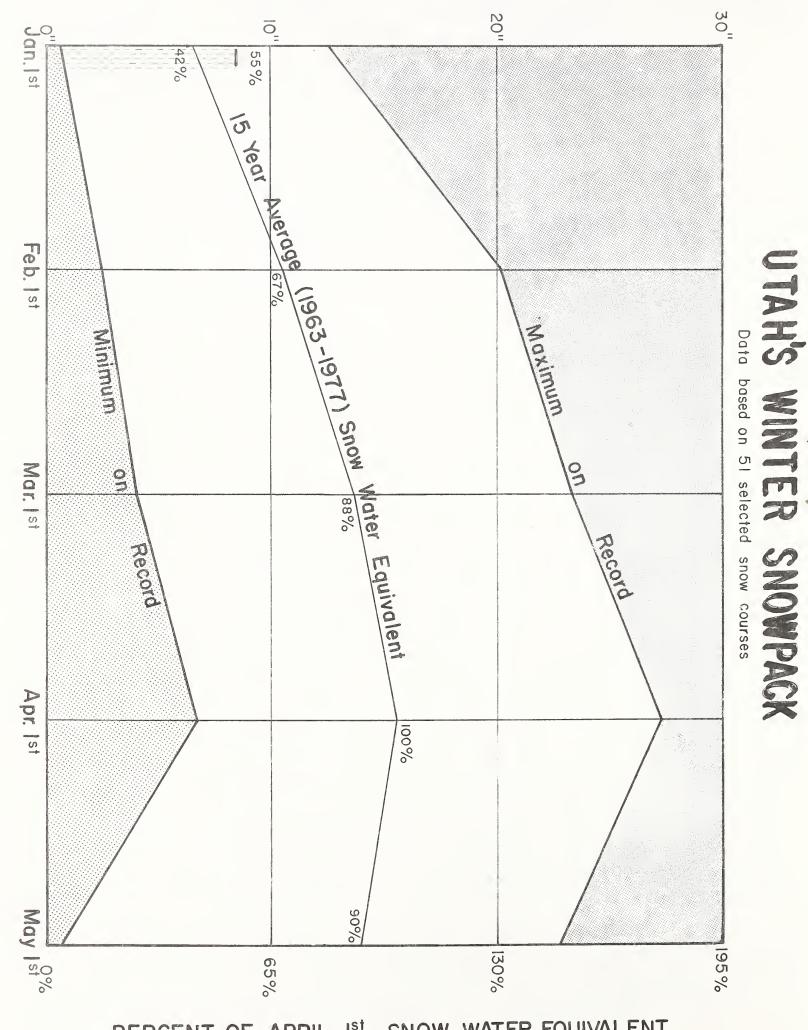
Streamflow at key streams over the state averaged 117% for December. Streams ranged from 250% of average on the San Juan to 72% for the Weber at Oakley. The Great Salt Lake is at the 4198.65 foot elevation as of January 1, 1979, according to the U.S. Geological Survey.

Streamflow forecasts will be published in the February 1, Water Supply Outlook bulletin.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH JANHARY 1 1070

			Usable Storage					
Basin or Stream	RESERVOIR	Usable Capacity	This Year	Last Year	Average			
GREAT BASIN								
Bear River	Bear Lake Woodruff Narrows	1421.0 26.5	978.9 18.5e	764.0 1.2	1035.4			
Beaver River	Minersville (RkyFd)	23.3	10.6	3.3	10.0			
Little Bear	Hyrum Porcupine	15.3 11.3	10.2	10.1	10.4			
<u>Ogden</u>	Causey Pineview	6.9	1.7 58.0	1.9 36.2	1.8b 52.1			
Provo	Deer Creek	149.7	Delayed	69.0e	107.3			
Settlement Creek	Settlement Creek Vernon Creek	1.2	0.5 0.5	0.3 0.2e				
Sevier River	Gunnison Otter Creek Piute Sevier Bridge	18.2 52.5 71.8 236.0	7.3 17.2 18.5 48.2	0.5 11.5 9.6 58.3	9.7 26.0 32.2 99.0			
Spanish Fork	Strawberry	270.0	157.4	137.9	147.8			
Utah Lake	Utah Lake	883.9	742.1	558.9	639.3			
Weber	East Canyon Echo Lost Creek Rockport Willard Bay	48.1 73.9 20.0 60.9 193.3	35.0 57.8 14.4 39.4 159.6	18.5 39.0 9.1 19.3 104.9	26.6 44.4 12.6b 37.9 121.6b			
COLORADO RIVER BAS	IN							
Ashley Creek	Steinaker	33.3	Delayed	5.7	19.0			
Colorado	Blue Mesa Lake Powell	829.5 25002.0	594.4 15686.0	235.3 15363.0	00a 10a 100 0a			
Green	Flaming Gorge	3749.0	2673.3	1990.7				
Lakefork	Moon Lake	35.8	Delayed	8.6	15.0			
Price River	Scofield	65.8	38.6	17.3	33.7			
San Juan	Navajo	1696.0	1196.0	977.9				
San Rafael Strawberry	Huntington North Joe's Valley Mill Site Starvation	3.9 54.6 16.7 165.3	Delayed Delayed 5.3 Delayed	1.8 33.0 0.3 131.7	1.7 35.1b			

+ = 1963-77 15 year average period e = estimated b = less than 15 years in average period



1979 Snowpack

SNOW WATER EQUIVALENT PERCENT OF APRIL IST

SNOW		THIS YEAR			RECORD	PRECIPI	TATION	(Inches		PPRDX. OCT I	TO DATE
DRAINAGE BASIN and/or SNDW COURSE NAME	Date of Survey	Snow Depth (Inches)	Watar Content (Inchas)	Water Cont Last Year	Average †	Date of Reading	Month's Precipitation	Average †	This Year	Average +	Percent of Average
GREAT BASIN											
UPPER BEAR RIVER (Above Harer, Idaho)											
Burts-Miller Ranch CCC Camp Hayden Fork Monte Cristo Salt River Summit Stillwater Camp	12/29 1/2 12/27 12/29	Not Meas 31 30a 33 39 Not Meas	6.0 7.7a 8.7 8.4	9.4 8.9 15.6 11.2	4.9	12/27 12/29	5.06	~ -	8.88	11.07b 7.17	80 92
LOWER BEAR RIVER (Below Harer, Idaho)											
Bug Lake Cub River R.S. Franklin Basin Garden City Summit Klondike Narrows Little Bear (lower) Little Bear (upper) Steep Hollow #2 Tony Grove Lake Tony Grove R.S.	12/26 12/26 12/26 12/26 12/26 12/26 12/26 12/26 12/26 12/26 12/26	34 19 35 36 32 25 28 52 39 57	8.8 3.7 9.7 9.9 8.0 6.1 6.9 14.3 10.3 16.4 7.1	 6.0 22.5 11.0 17.3 6.1 6.4 32.2 9.0	6.9 7.1 13.6 9.1	12/26 12/26			9.71 6.82	8.06	120
Willow Flat OGDEN RIVER	12/26	31	8.1	10.6		12/26	4.10		8.18	10.14b	81
Beaver Creek-Skunk Creek Ben Lomond (Lower) Ben Lomond Peak Ben Lomond Trail Causey Dam Cutler Creek Dry Bread Pond Sagebrush Flat	12/27 12/27 12/27 12/27 12/27	20 32 53 37 Discont 29 16	5.9 9.4 16.0 11.1 inued 7.8 4.2	7.2 8.0 18.9 	4.7 12.4 5.6b	12/27 12/27 12/27			11.41 11.67 6.37	11.25b 12.95b 6.62b	101 90 96
WEBER RIVER											
Beaver Creek R.S. Chalk Creek #1 Chalk Creek #2 Chalk Creek #3 Farmington Canyon (lower) Farmington G.S. Horse Ridge Kilfoil Creek Lost Creek Reservoir Park City Summit Parley's Canyon Summit Redden Mine (lower) Redden Mine (upper) Smith & Morehouse	1/2 1/2 1/2 1/2 12/27 12/27 12/27 12/27 12/27 12/28	Data Del 34 25 20 41 42 38 34 18 43 33 Not Mea Not Mea 23	8.8 6.1 4.8 12.4 13.1 10.9 8.5 4.2 12.2 7.6 sured	11.6 5.7 3.3 9.3 13.8 13.8 3.3 8.1	9.3b 12.9b	1/2 12/27 12/27 12/27 12/27 12/28	 		4.40 11.21 8.32 10.87 5.13 8.49	13.14 13.12b 10.49	85 63 81
PROVO RIVER & UTAH LAKE											
Beaver Creek Divide Camp Altamont Clear Creek Ridge #1 Clear Creek Ridge #2 Clear Creek Ridge #3 Dutchman R.S. Hobble Creek Summit Packard Canyon Payson R.S. Rock Bridge Soapstone R.S. South Fork R.S. Timpanogos Cave Camp Timpanogos Divide Trial Lake	12/30 12/30 12/30 12/30 12/30 12/30 12/30 12/30	Data De 34 35 34 24 35 38 Discont 31 Not Mea Data De Data De Data De 50 41a	10.6 9.0 7.9 5.1 9.8 9.7 inued 8.2 sured layed	5.2 9.3 6.8 4.7 7.7 5.9 5.5 3.4 8.1 3.2 0.2 7.7 15.1	6.5 8.0 5.4 5.3 2.6 1.2 10.8 10.3	12/30 12/30 12/30	 		8.80 10.35 8.95	 8.74	102

ORAINACE DAGIN		THIS YEAR		Water Conte	coro (inches)	PRECIPI	RENT INFORMA	(Inches)		PROX. OCT I	TO DATE
ORAINAGE BASIN and/or SNOW COURSE NAME	Oate of Survey	Snow Oepth (Inchas)	Watar Content (Inches)	Lest Year	Average +	Date of Reading	Month's Pracipitation	Avarage +	This Yeer	Average +	Percent of Average
JORDAN RIVER & GREAT SALT LAKE											
Lamb's Canyon #2 Middle Canyon Mill Creek Mill D South Fork Mt. Dell Dam	12/28 12/28 12/29 12/29	29 27 32 30	7.1 7.6 7.5 8.4	7.2 2.2 7.0 7.4	 6.1b 8.2	12/28 12/28		 	7.03 8.60		
Silver Lake (Brighton) Snow Bird (Gad Valley) Vernon Creek	12/29 12/28	41 Data Del 29	11.4 ayed 8.5	9.6 1.8	10.3	12/30	4.92 	4.98	12.30 8.90	12.67	97
UPPER SEVIER RIVER (South of Richfield, Utah)						į					
Box Creek Bryce Canyon Castle Valley Duck Creek R.S. Harris Flat Kimberly Mine Midway Valley Panguitch Lake Squaw Springs Farview Rainbow Point	12/26 12/28 12/26 1/2 1/2 12/26 1/2 12/26 12/29 12/29	34 25 40 38 28 30 52 24 22 34 38	10.6 4.6 10.8 9.8 7.2 9.2 14.4 6.2 6.3 6.3 10.0	3.5 0.5 3.3 3.6 4.0 4.9 4.1 1.0 2.2 1.0	2.1 	12/26 12/26 1/2 12/26 1/2 12/26			9.80 12.05 12.73 9.28 16.30 8.10	 8.03 8.07 	159 115
LOWER SEVIER RIVER (Including San Pitch River)											
Beaver Dams Farnsworth Lake G.B.R.C. Headquarters G.B.R.C. Majors G.B.R.C. Meadows G.B.R.C. Oaks Gooseberry R.S. Mammoth-Cottonwood Creek Middle Fork Mt. Baldy R.S. Oak Creek	12/27 12/28 12/26 12/26 12/28 12/26 12/27	20 29 28 37 21 34 Not Meas	10.4	3.9 6.6 5.7 9.7 3.9 11.1	4.2b 8.0 6.8 9.0b 5.3 7.9	12/27 12/28 12/26 12/30 12/26 12/30 12/28	 3.80 2.10 2.60 Precip d	 lisconti	9.10	5.84b 8.55 8.54 4.23b 10.14 5.80	110 89 95 109 92 95
Pickle Keg Springs Pine Creek Ree's Flat Shingle Mill Thistle Flat	1/3 1/2 12/26 12/29 1/3	29 26a 27 25 18 Not Meas	7.3 6.9a 8.8 6.8 5.2 ured	2.7 7.0 4.4 4.9 1.0	 4.5b	1/3 12/26 12/29 1/3	 		9.21 6.75 6.70	 8.15b	 82
BEAVER RIVER											
Beaver Canyon Power House Beaver Race Track Big Flat Merchant's Valley (upper) Otter Lake	1/2 12/26 12/26 12/26	0 40 29 35	0.0 10.0 7.0 8.2	0.0 4.8 3.6 3.0	 	12/30 12/26 12/26	2.14	1.73	5.89 9.69 7.17	4.22 	140
PAROWAN CREEK											
Birch Crossing Brian Head Tall Poles Yankee Reservoir	12/27 12/26 12/27 12/26	23 50 34 28	5.4 14.0 8.4 7.6	0.9 4.2 2.8 0.9	3.2b 8.8b 6.0b	12/27 12/26	 		5.95 6.25	7.28b 	82
ENTERPRISE TO NEW HARMONY DRAINAGES											
Little Grassy Creek Long Flat	1/3 1/3	19 24	5.4 6.6	0.0 2.1		1/3 1/3			10.90 10.35		
COAL CREEK											
Cedar City Golf Course SUSC Ranch	1/3 12/27	0 31	7 0.0 7.8		 3.4						

NOW		THIS YEAR			ECORD	PREUIPI	RENT INFORM	(Inches)		0000	
DRAINAGE BASIN and/or SNOW COURSE NAME	Date of Survey	Snow Oepth (Inches)	Water Content (Inches)	Last Year	Average †	Date of Reading	Month's Precipitation	ATION Average +	This Year	PROX. OCT	
COLORADO RIVER DRAINAGE											Average
UPPER GREEN RIVER - UTAH											
Black's Fork G.SEast Fork Black's Fork Junction Burnt Creek Dutch John Junction Grizzly Ridge Hewinta G.S. Hickerson Park Highline Trail King's Cabin (lower) King's Cabin (upper) Spirit Lake Steel Creek Park Trout Creek	12/28 12/28 12/28 12/28	Data De Data D	layed 4.2 3.8 7.1 layed layed layed layed 7.0a layed	1.3 1.4 2.8		12/28			5.40 7.32	4.49b 6.31b	
D UCHESNE RIVER											
Brown Duck Ridge Currant Creek Daniels-Strawberry Summit East Portal Indian Canyon Jackson Park Lakefork Mountain Lakefork Mountain Paradise Park Rock Creek Ranch Strawberry Divide	1/2 12/30 12/30 12/30 12/30 12/30 1/2 1/2	28a 28 34 31 39 Data De 23a Data De 29a Data De Data De	5.6a layed 6.9a layed	5.0 7.0 7.0 6.3	 5.6 4.5 5.2 4.2	12/30 12/30 12/30	 4.07 	 	9.96 10.03 10.27	8.44 7.80 6.28	118 129 164
PRICE RIVER											
Dry Valley Divide Gooseberry Reservoir Jones Ranch Mud Creek White River #1 White River #2 White River #3	12/26 12/30 12/30	Not Meas Snow Cou Disconti 30 32 Disconti	rse Disc nued 6.7 8.5	ontinued 7.1 7.2 5.7	5.7	12/26			8.83	6.50	136
SAN RAFAEL RIVER											
Buck Flat Huntington-Horseshoe Orange Olsen Red Pine Ridge Rush Pond Seeley Creek R.S. Stuart R.S. Upper Joe's Valley Wrigley Creek	12/27 12/26 12/29 12/26 12/26 12/26 12/26 12/28	27 32 13 28 Disconti 24 20 21 26	7.2 10.5 2.5 8.0 nued 7.4 4.2 5.0	8.0 11.0 1.0 7.2 5.9 5.5 5.0 5.3		12/27 12/29 12/26			8.80 5.35 9.30 6.40	6.30	140
AUDDY RIVER	12/20	20	2.0	٠.٥							
Black's Fork Dill's Camp	1/2	Not Meas 20a	ured 5.5a	7.0		12/28			7.33		
FREMONT RIVER	_, =		3.52	,.0	_	12/20		_	,.,,	_	
Black's Flat-U.M. Creek Fish Lake Johnson Valley	12/28 12/28 1 2/28	28 21 22	7.6 5.1 5.0	4.0 2.0 2.7	 	12/28			7.88 6.80	 5.02b	 135
SOUTHEASTERN UTAH DRAINAGES											
Buckboard Flat Camp Jackson LaSal Mountain (lower) LaSal Mountain (upper) Monticello City Park	12/27 12/27 12/28 12/28 12/29	46 43 23 33 15	14.2 11.8 5.6 8.8 4.4	2.1 1.2 3.2 4.8 0.0		12/27 12/27 12/28			15.20 15.00 8.24		

	THIS YEAR		L		PRECIPI	TATION				
Oata of Survey	Snow Oepth (Inchas)	Water Content (Inchas)		nt (inches)	Oate of	Month's		FROM AF		
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	Disconti	nued								
			1.6	4.5	12/28			11.35	6.01	189
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SNOW COURSES AND RELATED DATA MEASURING SITES

UTAH



USGS Notional Atlos 1:1,000,000 Albers Equal-Area projection (1967) used as source for base map and adapted for SCS use.

INDEX TO UTAH, BEAR & UPPER COLORADO RIVER BASINS

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Agencies Cooperating in Utah Snow Surveys

U.S. GOVERNMENT AGENCIES

- U.S. Department of Agriculture Soil Conservation Service Forest Service
- U.S. Department of Commerce NOAA, National Weather Service
- U.S. Department of Interior
 Bureau of Reclamation
 Geological Survey
 National Park Service

STATE AGENCIES

Utah State University
Utah Fish and Game Department
Utah State Department of Natural
Resources, Division of Water Rights
Bear River Commissioner
Price River Commissioner
Provo River Commissioner
Sevier River Commissioners
Spanish Fork River Commissioner
Utah Lake and Jordan River Commissioner

MUNICIPALITIES

Manti Salt Lake City

ORGANIZED PUBLIC AGENCIES

Beaver River Water Users Association
Board of Canal Presidents - Jordan River
Emery Canal and Reservoir Company
Moon Lake Water Users Association
Ogden River Water Users Association
Provo River Water Users Association
Strawberry Water Users Association
Sevier River Water Users Association

PRIVATE AGENCIES

Kaiser Steel Corporation

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FEDERAL BLDG., - ROOM 4012 SALT LAKE CITY, UTAH 84138 125 SOUTH STATE ST.

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domestic and municipal water supply, hydro-electric power water supply for irrigation, necessary for forecasting generation, navigation, Furnishes the basic data mining and industry "The Conservation of Water begins with the Snow Survey"